

REMARKS/ARGUMENTS

Claims 1-28 are pending in the present application. In order to expedite prosecution, Applicants have amended claims 1, 4-5, and 9-15 and have cancelled claims 2, 3, and 8 to more particularly point out and distinctly claim that which Applicants consider to be their invention.

Upon entry of the above-made amendments claims 1, 4.7, and 9-28 will be pending in the current application. The amended claims 1, 4-5, and 9-15 are fully supported in the specification as originally filed. Therefore, the amendments to the claims do not add new matter. Applicants respectfully request that the amendments be entered.

The following remarks, in conjunction with the above amendments, are believed to be fully responsive to the Office Action.

THE REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

SHOULD BE WITHDRAWN

Claims 1-28 are rejected under 35 U.S.C. 112, first paragraph, because the specification does not reasonably provide enablement for any or all iodine salt and fluorination any or all aromatic or heteroaromatic compounds generically embraced in claim 1 and compounds with diverse structure embraced in claims 15-18. The Examiner further responds by stating that the specification does not enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Applicants reply by amending claims 1, 4-5, and 9-15 to overcome this rejection. Applicants further respond by specifically pointing out that

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in amended claim 1, the substituents on Q can be protected, thereby addressing the issue

raised by the Examiner of what to do where there are reactive groups on the starting iodonium salt. One skilled in the art of organic chemistry will know which groups need to be protected and how (page 11 lines 2-4 refer to common general knowledge re protecting groups). Therefore, where the starting iodonium salt has reactive groups, these can be protected so as not to interfere with the desired reaction.

The Examiner also states that the reaction of claim 1 may not lead to the desired aromatic product because the nucleophilic displacement can occur at both sides of the iodonium salt and where both sides are not aromatic a non-aromatic product may be obtained. Amended claim 1 has an iodonium salt starting material that has an aromatic group on both sides of the iodonium starting compound, as Q is defined as an aromatic/heteroaromatic group. The iodonium salt of amended claim 1 therefore results in the desired fluorinated aryl or heteroaryl.

The Examiner also states that there is no teaching as to how to make the starting material for the fluoridation reaction. Detail is provided for how to obtain diaryliodonium salts in a number prior art references cited in the present application, i.e. Pike & Aigbirhio (page 2215 2nd column 1st para states that a "selection of known diaryl iodonium salts...purchased or otherwise prepared by treating substituted benzenes with (diacetoxy)iodobenzene, iodosyl benzene, or iodine trifluoroacetate"; van der Puy (page 390 "Preparation of iodonium salts"); and, Shah et al (page 2043 2nd column penultimate para "...a series of functionalised diaryliodonium salts have been synthesised...by established

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methods" referring to references 14-16). Therefore, the patent specification provides the

skilled person with the necessary information to obtain a range of diaryliodonium salts (note that the limitation to iodonium salt of formula I or II means that starting material is a diaryliodonium salt).

Furthermore, the Examiner objects that it is not described in the specification how to achieve the fluoridation and what starting materials are used. The specification makes clear that the claimed method is carried out as described in the prior art but with the inclusion of water in the reaction (page 4 lines 3-17 and experimental examples). Therefore, the skilled person is provided with sufficient information to carry out the method of claim 1 over its whole scope.

Furthermore, a skilled person in the art would reasonably expect to be able to successfully extrapolate from the experimental examples to the range of diaryl iodonium salts encompassed by amended claim 1. Additionally, the method as exemplified in the examples results in comparable or better RCP than the prior art methods, as the prior art clearly teaches against water in the reaction mix. Applicants respectfully submit that there is no reason why extrapolation to a range of other diaryl iodononium salts is not possible, and that such extrapolation would not require undue experimentation (similar reaction conditions would be expected to work).

Therefore, Applicants respectfully request that the rejections of the 35 U.S.C. 112, first paragraph, of claim 1-28 be withdrawn.

THE REJECTIONS UNDER 35 U.S.C. § 102

SHOULD BE WITHDRAWN

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Grushin et al. (Grushin). In response, Applicants submit that claim 1 has been amended to overcome Grushin. Grushin teaches a reaction of diphenyl iodonium fluoroborate with sodium fluoride in a biphasic reaction system, i.e. chloroform+water or dichloroethane+water (page 2131 1st para). Neither chloroform nor dichloroethane is a water-miscible solvent – one skilled in the art would be aware of this and this fact is evidenced in that they are used to produce a biphasic system. Amended claim 1 is therefore novel over Grushin.

In view of the foregoing, it is respectfully submitted that 35 U.S.C. 102(b) rejection of claim 1 over Grushin be withdrawn.

THE REJECTIONS UNDER 35 U.S.C. § 103

SHOULD BE WITHDRAWN

Claims 1-14 and 18-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Grushin et al. (Grushin). In response, Applicants submit that each of the rejections should be withdrawn for the reasons stated below.

First Applicants respectfully point out that it would be obvious for one skilled in the art to combines Grushin's teachings of biphasic system for fluoridation of diaryliodonium

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salts with Grushin's teaching of homogenous system for arylation of anions by

diarylhalonium salts. These teachings are not combinable. There is an overall teaching in the prior art that fluoridation reactions need to be carried out under anhydrous conditions (as clearly discussed in present spec pages 1-3). Therefore, the skilled person would not be motivated to carry out fluoridation of diaryliodonium salts using reaction conditions suitable for arylation of anions; and in particular the skilled person would have been motivated against using water in the reaction solvent. Claim 1 is therefore not obvious over Grushin.

It is impermissible within the framework of 35 U.S.C. §103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443 (Fed. Cir. 1986). (emphasis added).

In view of the foregoing, it is respectfully submitted that 35 U.S.C. 103(a) rejections of claims 1-14 and 18-28 over Grushin be withdrawn.

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CONCLUSION

In view of the amendments and remarks herein, Applicants believe that each ground for rejection or objection made in the instant application has been successfully overcome or obviated, and that all the pending claims are in condition for allowance. Withdrawal of the Examiner's rejections and objections, and allowance of the current application are respectfully requested.

The Examiner is invited to telephone the undersigned in order to resolve any issues that might arise and to promote the efficient examination of the current application.

Respectfully submitted,

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